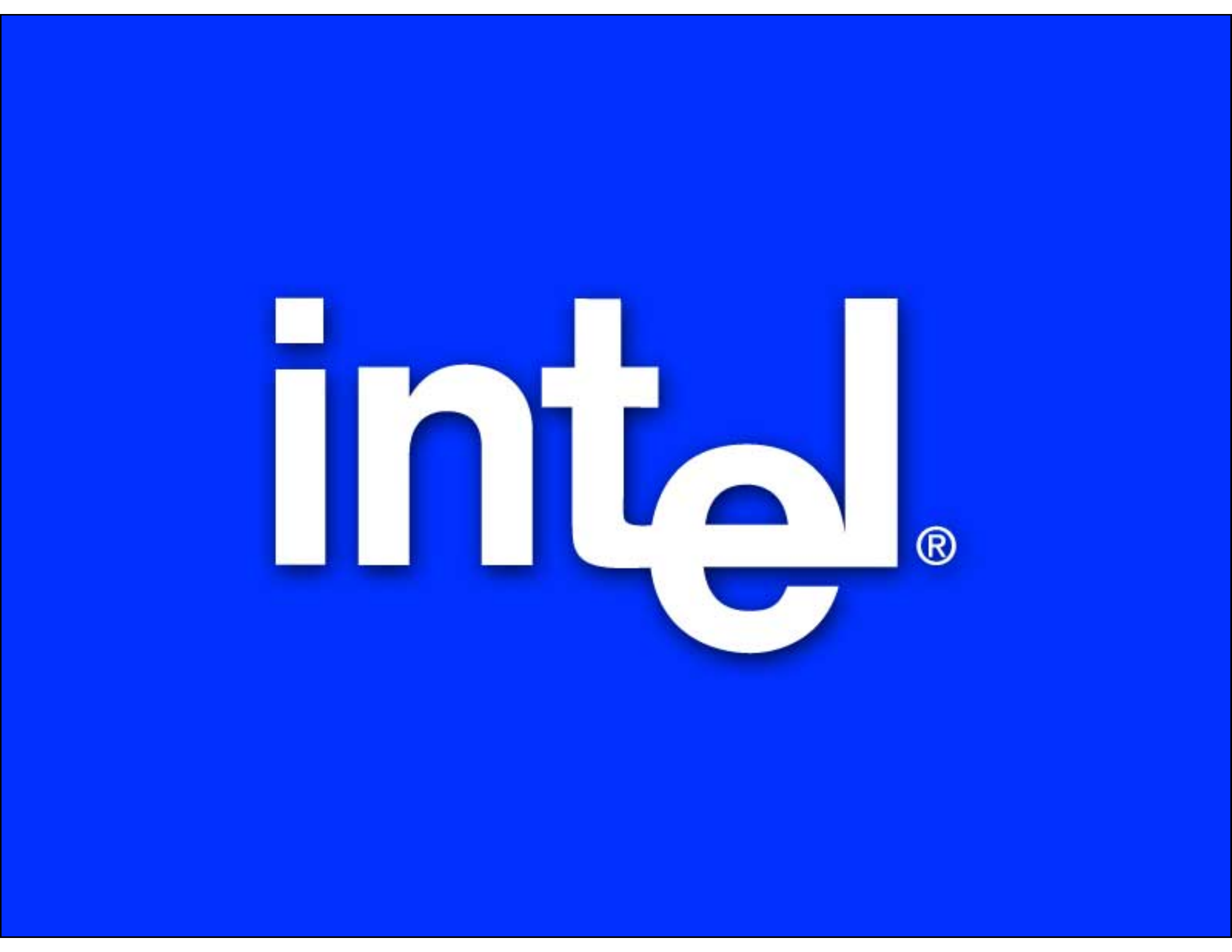
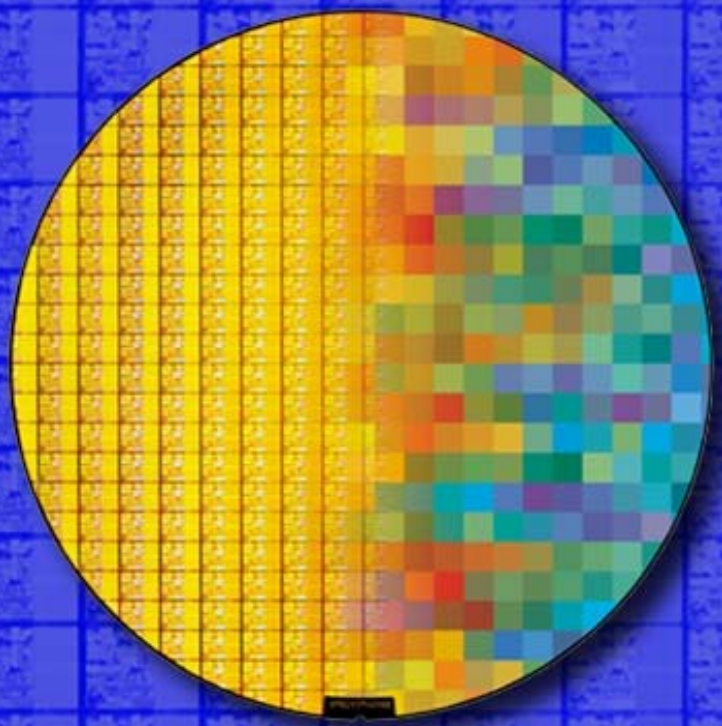

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Justin Rattner

Intel Senior Fellow and Director
Corporate Technology Group

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What does it mean to lead?

Imagine the future…

Platform 2015


Imagine a world…
Where technology becomes more natural
Intel Developer
FORUM


Imagine a home…
That enhances the quality of my life
Which cheese is mainly used in Pizza?
Answer for a FREE* KitchenAid® Mixer!
*See details
MY RECIPE BOX
COMMUNITY
Cooking
Recipes
TV
Entertaining
Wine &
Home > Recipes
Prawn and Pea Risotto with Basil and Mint
Recipe Summary
Prep Time: 10 minutes
Cook Time: 40 minutes
Yield: 4 to 6 servings
Recipe Box
Intel Developer FORUM


Imagine a workplace…
That lets my team achieve its goals
Intel Developer
FORUM


Imagine when…
I can make sense
out of all the data
Intel Developer
FORUM


Imagine a place…
Where the virtual seems real
Intel Developer
FORUM


Imagine when…
I can look into the future


Inside the labs...
Intel Developer
FORUM


Intel's Research Team
Intel Developer FORUM





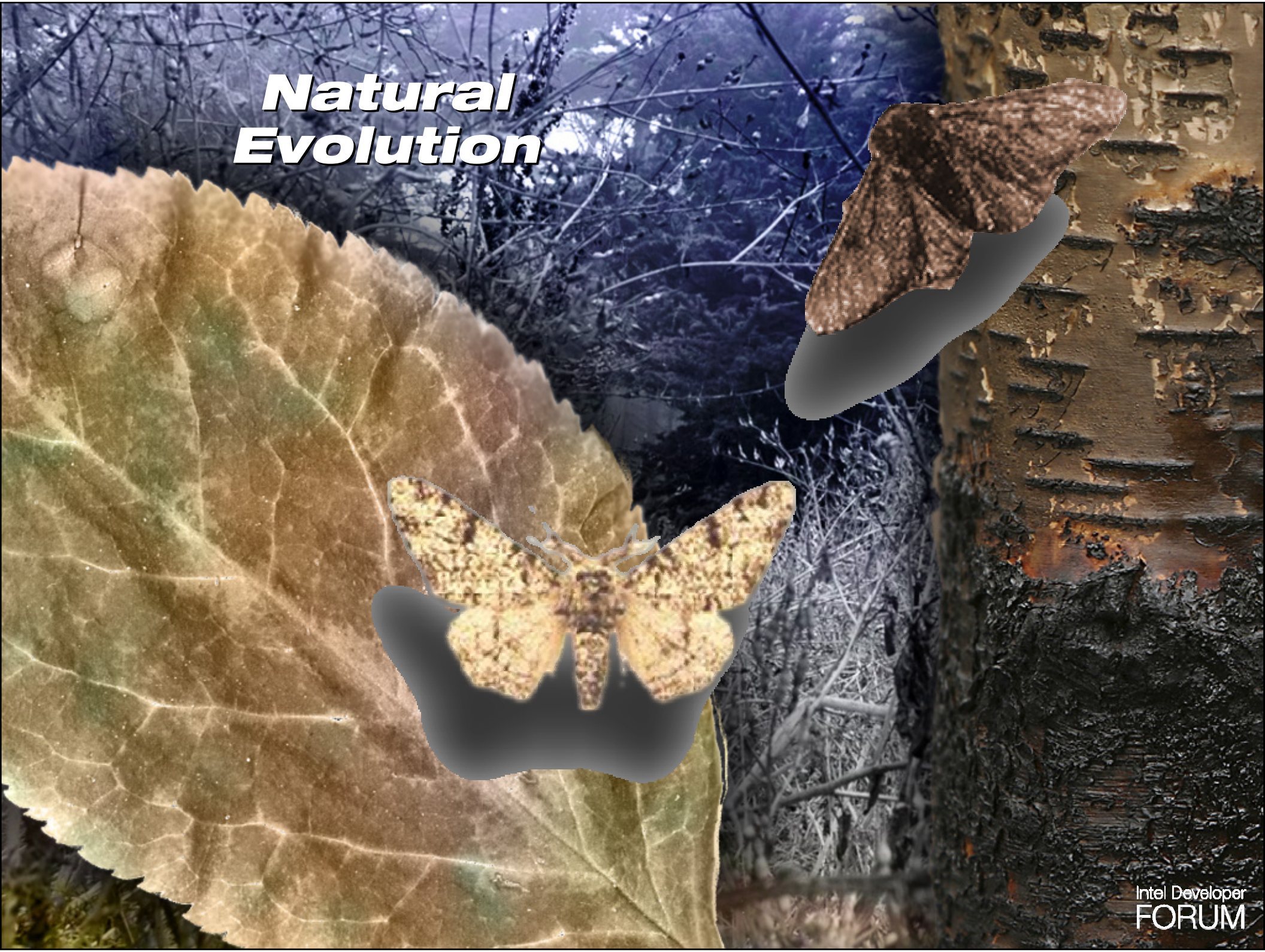
Steve Sullivan

Research and Development
Industrial Light and Magic





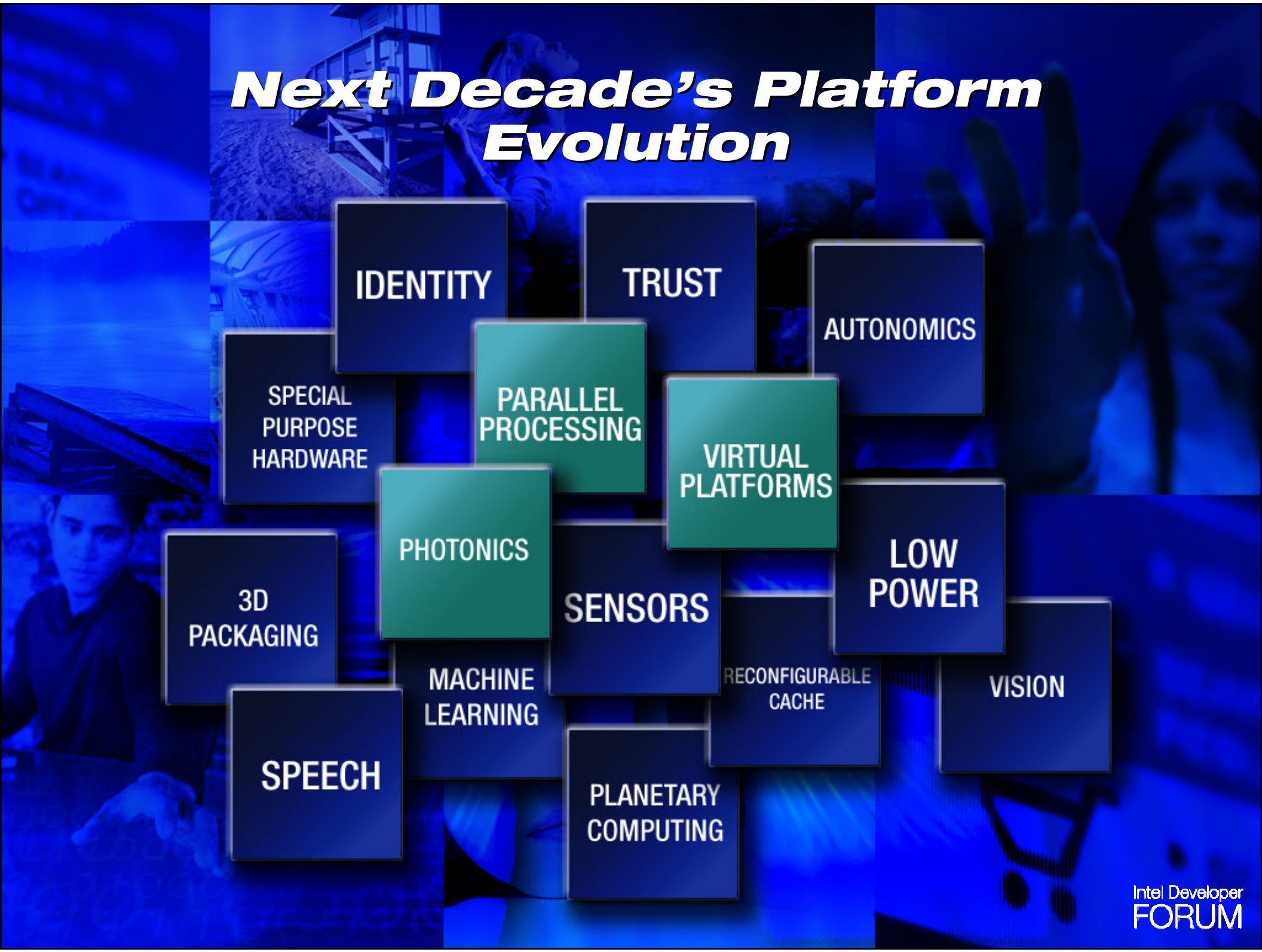
Do new uses require new architecture?


Natural
Evolution
Intel Developer
FORUM


Ever Evolving Intel Platform
Intel Developer
FORUM


Intel Developer
FORUM

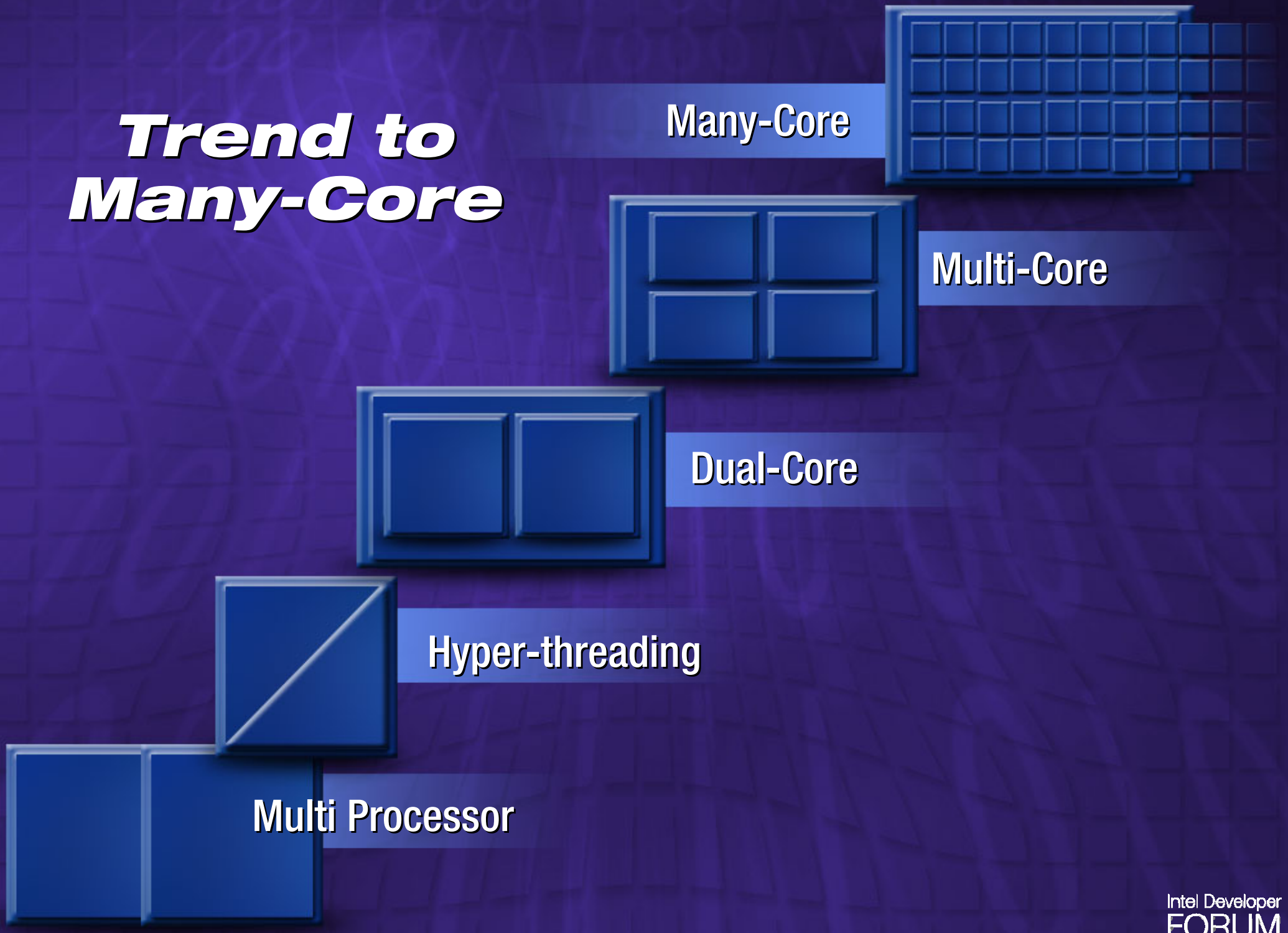
Next Decade's Platform Evolution



Can we fully virtualize the platform?

Can we meet the computing demands of the future?

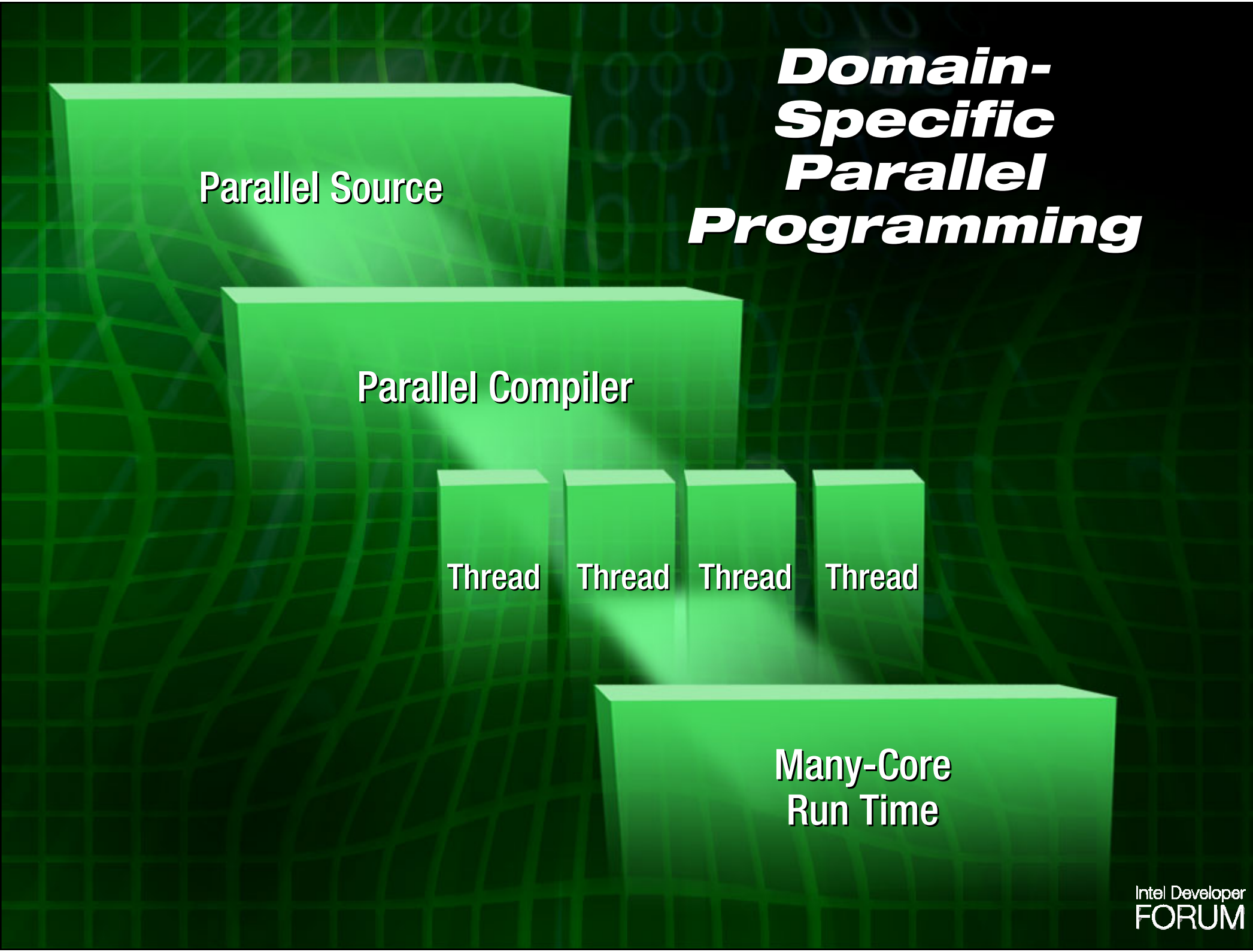
Trend to Many-Core



Can you program it?

Can we feed it?

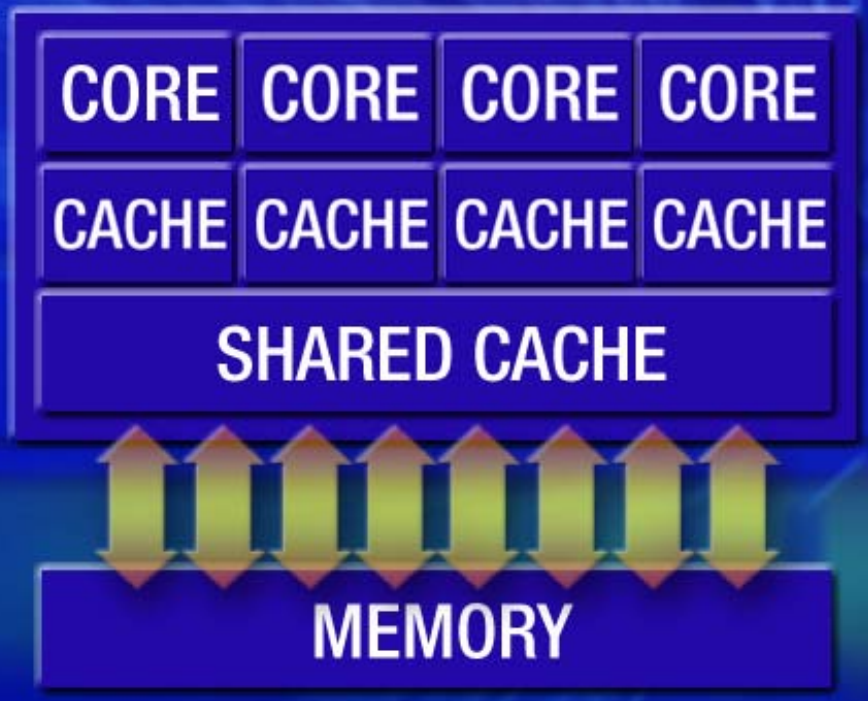
Domain-Specific Parallel Programming

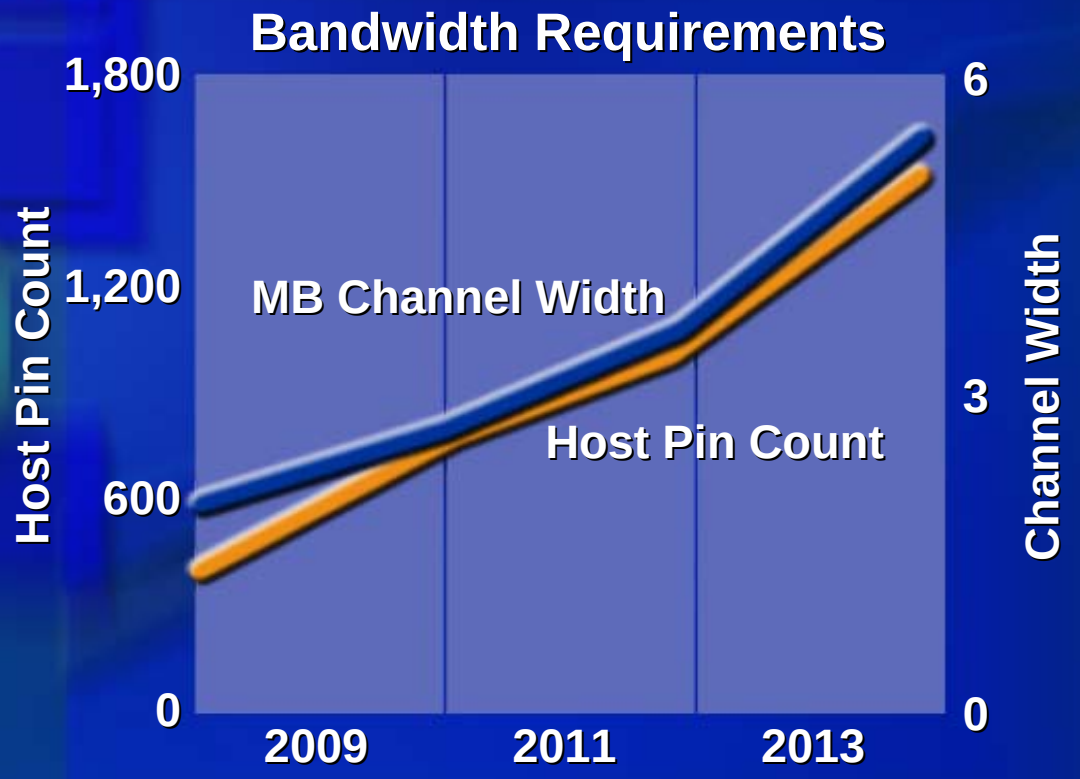


Can you program it?

Can we feed it?

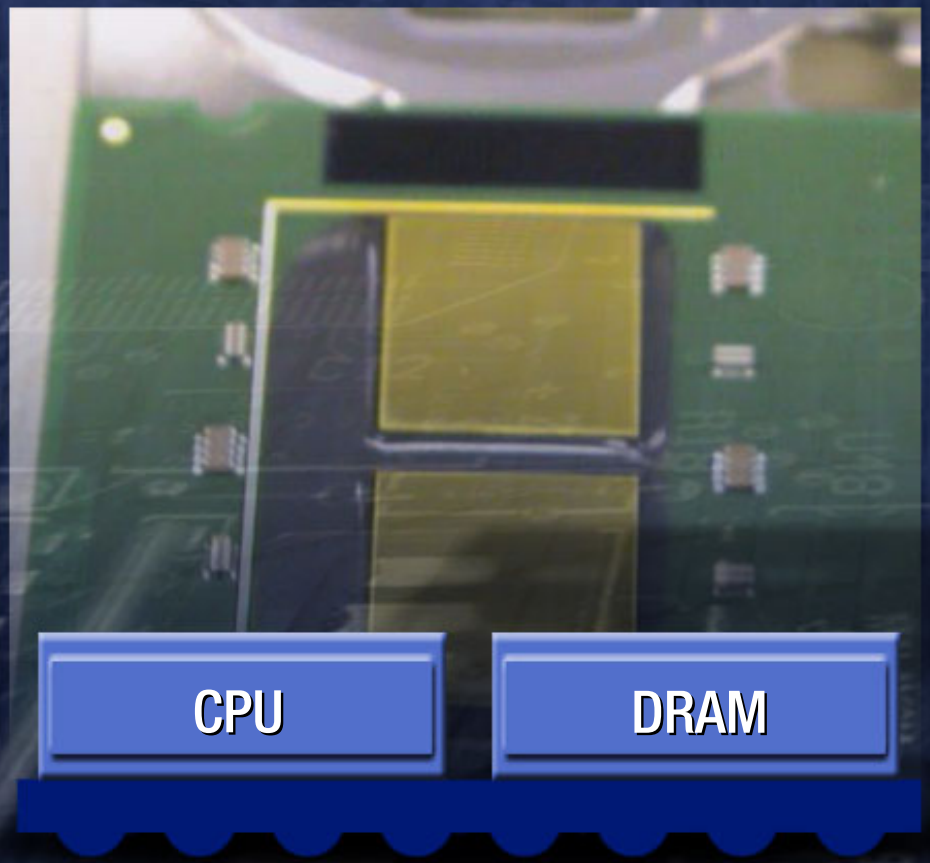
Memory Bandwidth Challenge



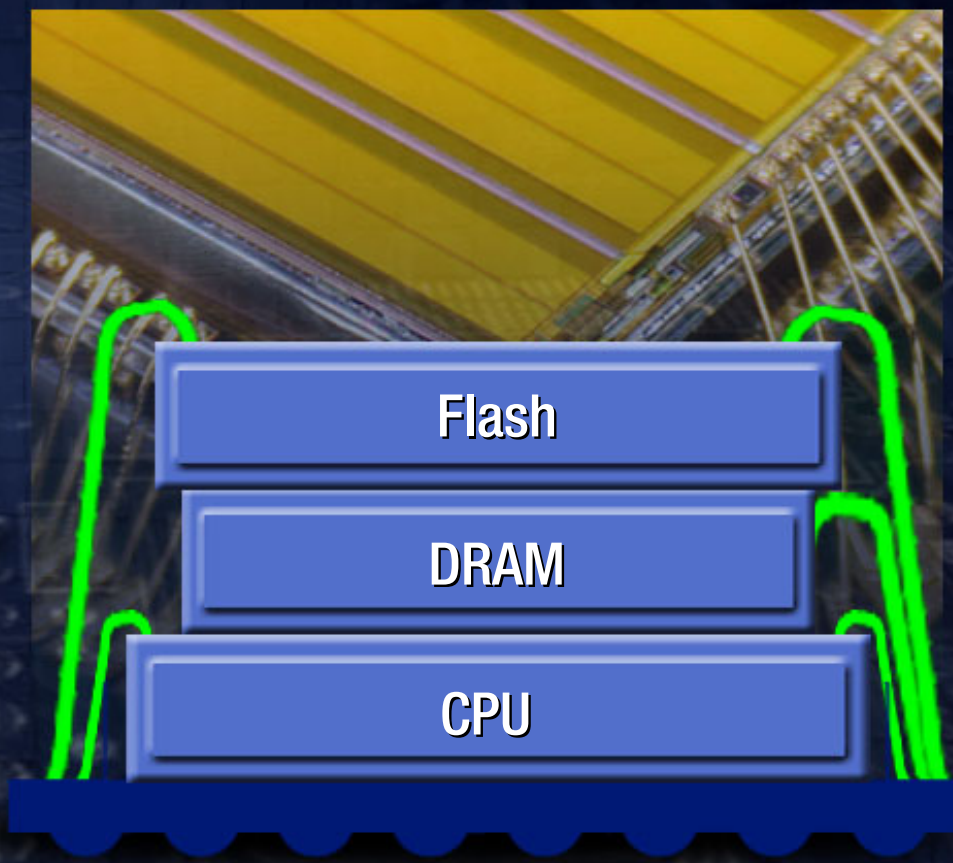


Today's Packaging Technology

Multi-Chip Package

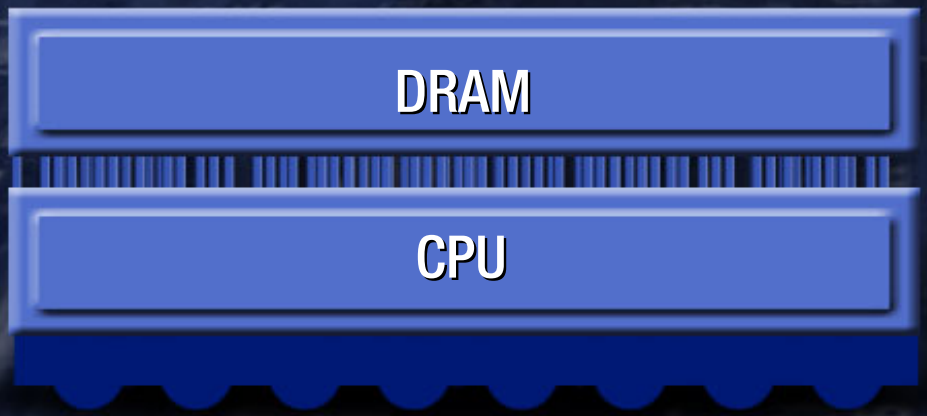


Wire-Bonded Stacked Die

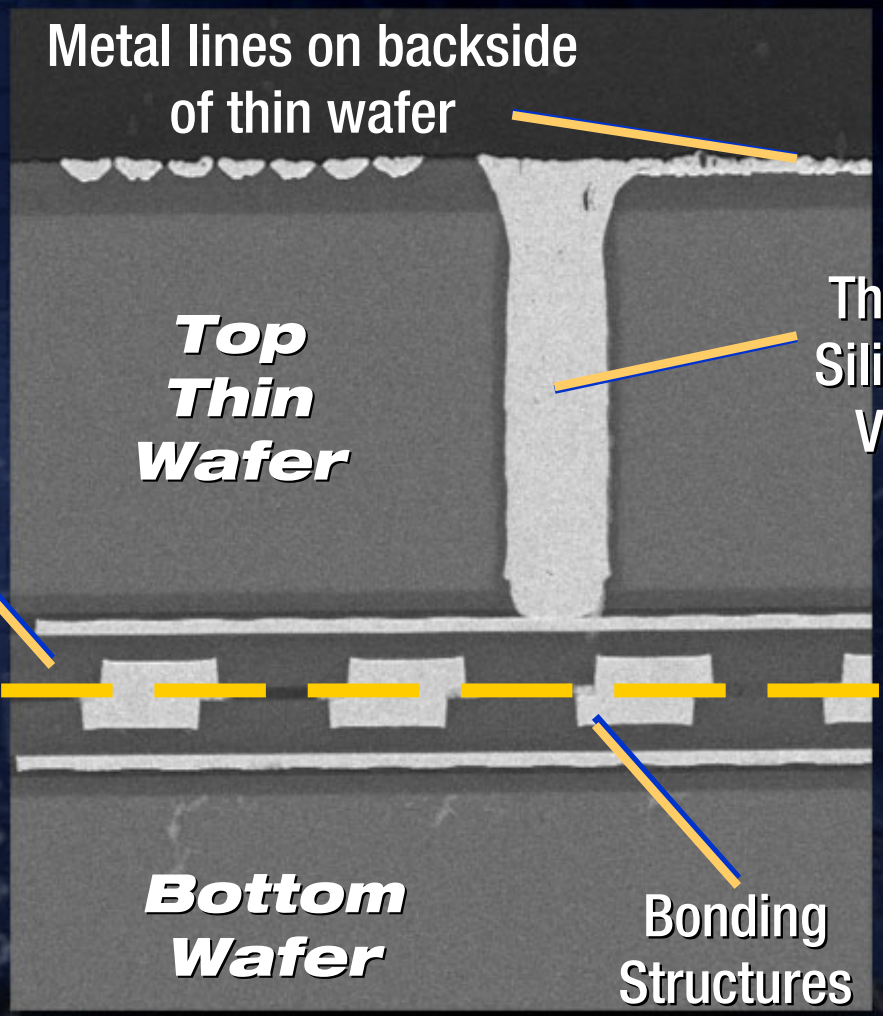


3D Stacking Research

Wafer Stacking



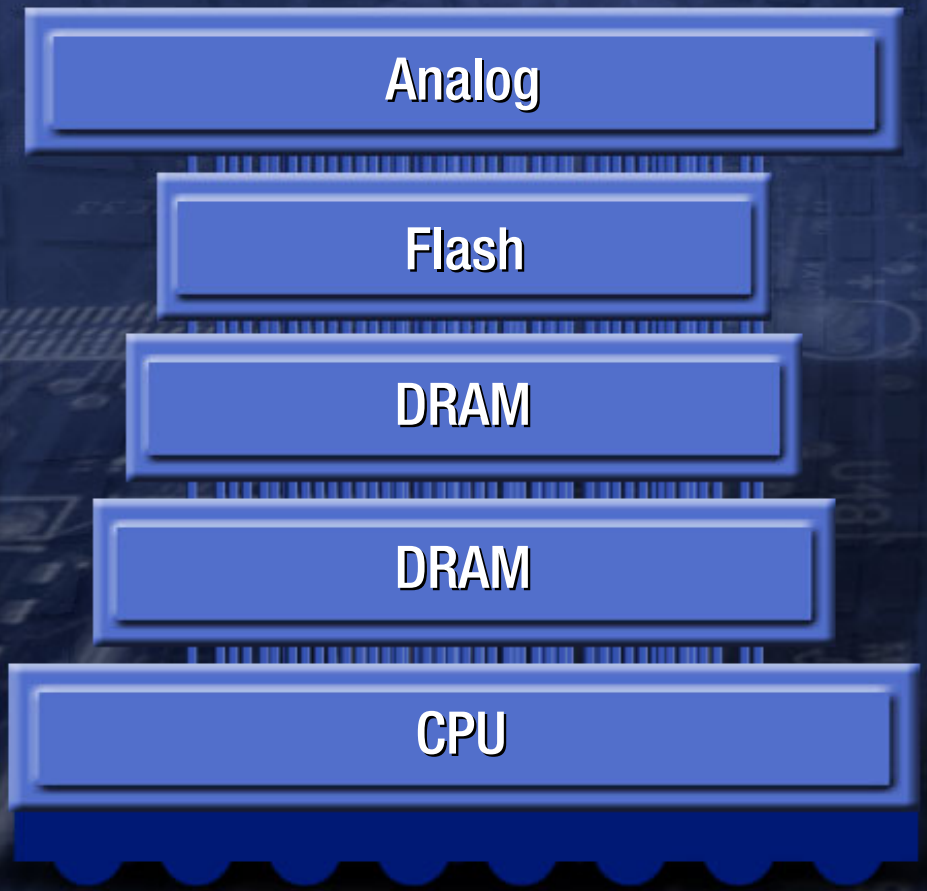
Bonding Interface



Source: Intel

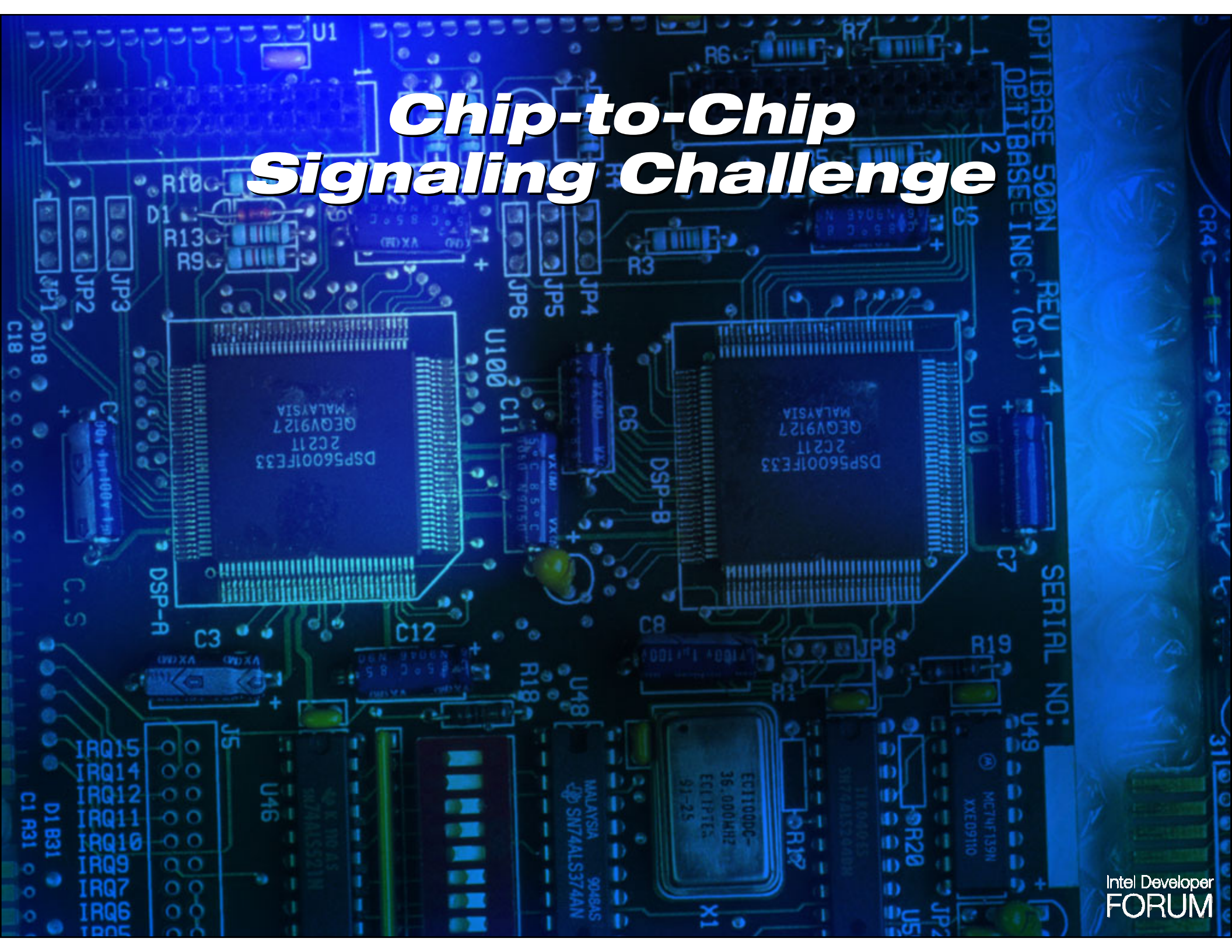
3D Stacking Research

Die Stacking

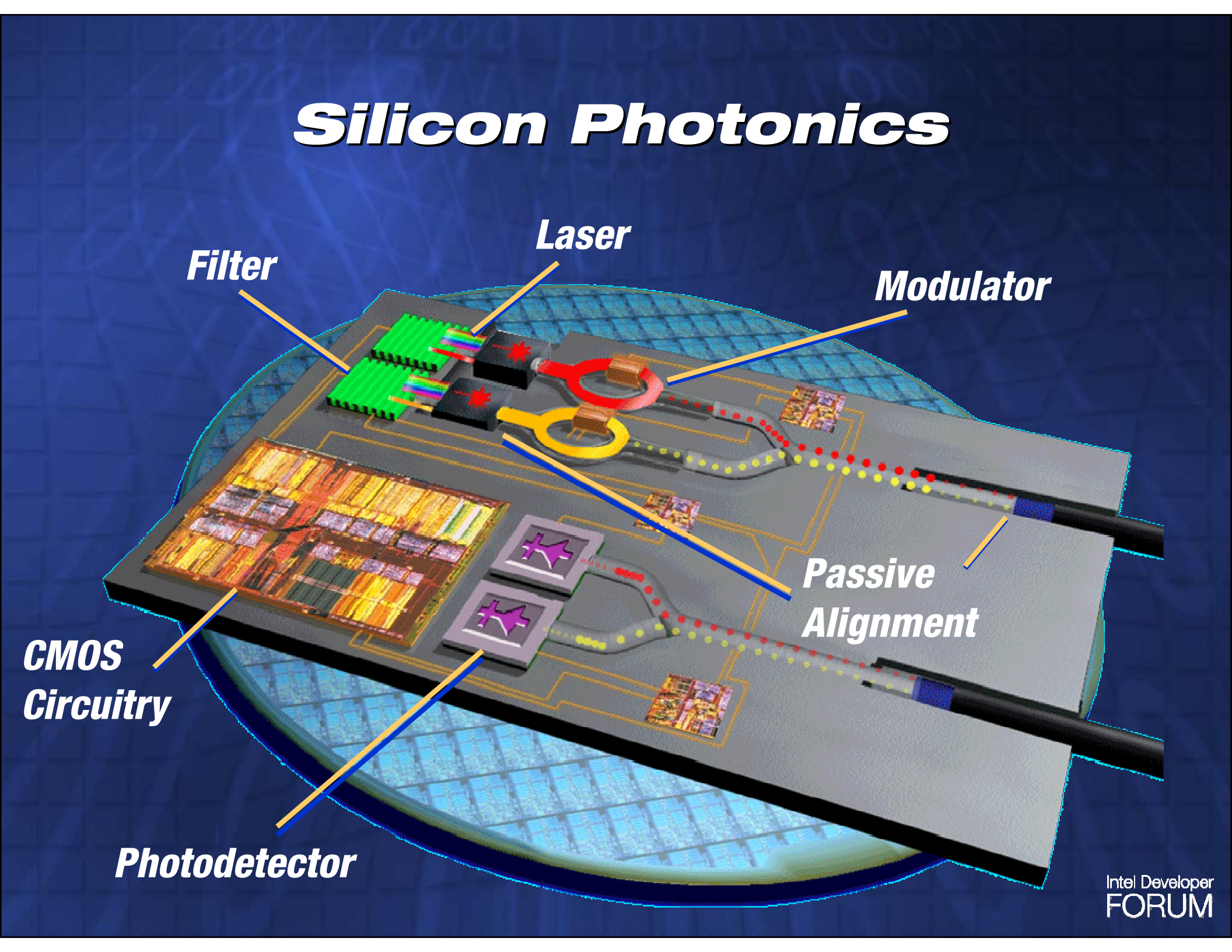




Source: Intel


Chip-to-Chip
Signaling Challenge
Intel Developer
FORUM

Silicon Photonics

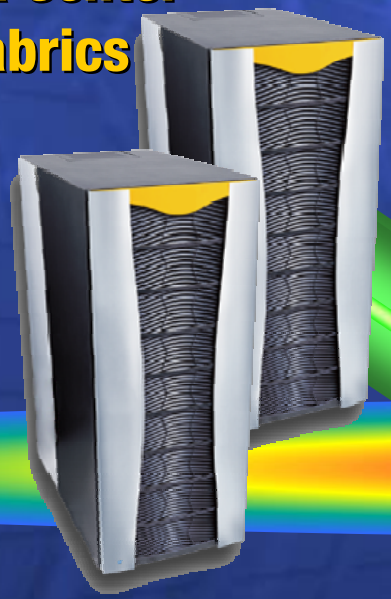


Can we build a silicon laser?


First Continuous
Silicon Laser
Nonlinear atom optics
SPECTRUM
ONLINE
WEB ONLY NEWS
Intel Makes a Silicon Laser

Silicon Photonics Future Vision

Data Center Fabrics

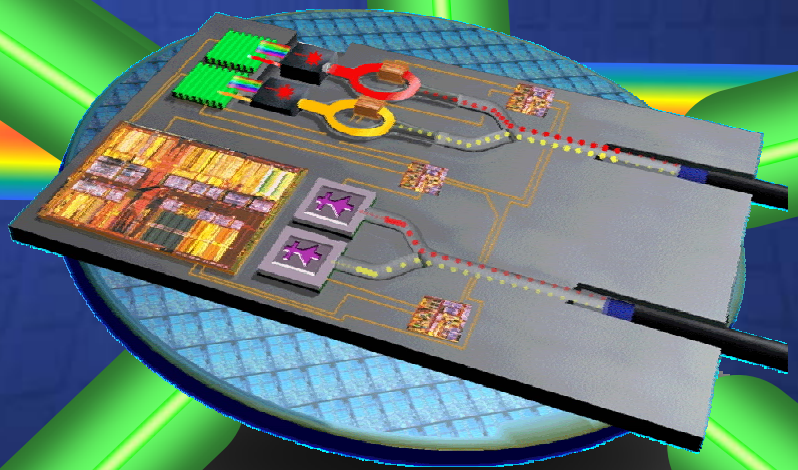


Chip-to-Chip Interconnects



Backplane and Display Interconnects







Chemical Analysis

Medical Lasers



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Can we create the future?


Imagine the Uses...


Evolve From
My TV
My Music
My Pictures
My Videos
Play DVD
Settings

Imagine... Platform 2015

Voice and vision

Human-like behavior

Fully virtualized

Parallel and programmable

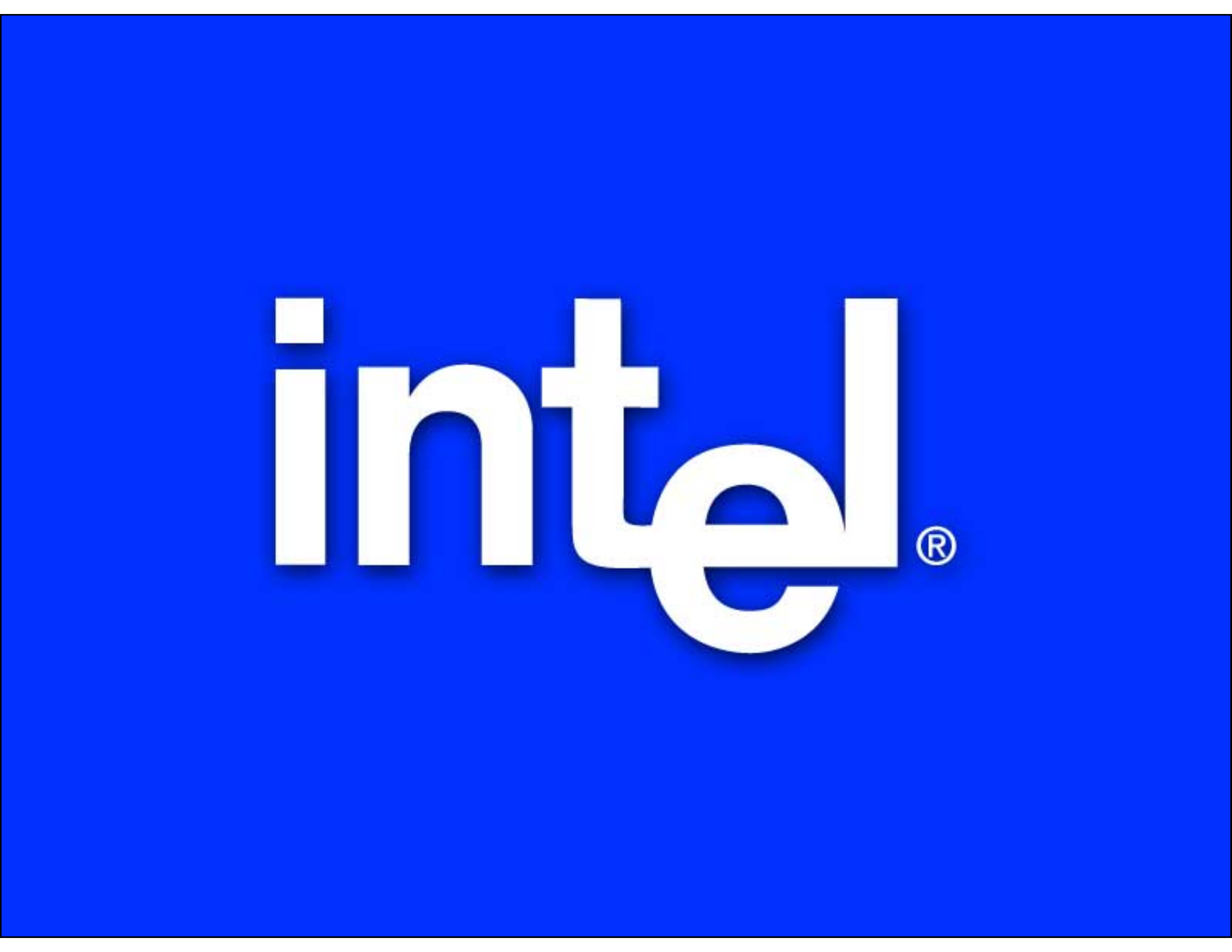
10s to 100s cores and threads

100s Gbps chip-to-chip signaling

10s billions transistors

We can’t do it alone.


Let’s create the future together.


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